REMARKS

Claims 21-25 have been withdrawn. Claims 1-20 and 26-44 are now pending in this application. In view of the following remarks, Applicants respectfully request reconsideration of the present application and submit that the application is in condition for allowance.

Restriction Requirement

On page 2 of the Office Action, the Examiner states that the election between Group I (claims 21-25) and Group II (claims 1-20 and 26-44) is still deemed proper and is made final. Applicants elected to pursue the claims of Group II (claims 1-20 and 26-44) in the Response to the Restriction Requirement dated July 12, 2005. Claims 21-25 will be canceled when claims 1-20 and 26-44 are deemed allowable.

Rejection of Claims 1-20 and 26-44 Under 35 U.S.C. § 103(a)

In the Office Action, claims 1-20 and 26-44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,379,988 (Peterson). Applicants respectfully traverse this rejection because the Examiner has failed to present a prima facie case of obviousness. MPEP § 2143 states:

> To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

At a minimum, the Examiner has failed to demonstrate that Peterson discloses, teaches, or suggests all of the claim limitations as recited in Claims 1-20 and 26-44.

Claims 2-12 depend from claim 1. Claim 1 recites:

> applying a film onto the structural feature by energy beam assisted deposit of material from a vapor through which the beam passes to cover at least a portion of the structural feature

Claims 14-20 depend from claim 13. Claim 13 recites:

> applying a film of carbon onto the structural feature by scanning an electron beam over the structural feature to deposit material from a vapor containing carbon through which the beam passes to cover at least a portion of the structural feature

Claims 27-34 depend from claim 26. Claim 26 recites:

> applying a film of carbon onto the structural feature by scanning an electron beam over the structural feature to deposit material from a vapor containing carbon through which the beam passes to cover at least a portion of the structural feature

Claims 36-44 depend from claim 35. Claim 35 recites:

> applying a film of carbon onto the structural feature by energy beam assisted deposit of material from a vapor containing carbon through which the beam passes to cover at least a portion of the structural feature and an adjoining portion of the surface of the base to hold the structural feature in place on the base

On pages 3-4, of the Office Action dated 8/26/2005, the Examiner states:

> Regarding to claim 1, Peterson discloses a method of forming microelectromechanical structures comprising ...; applying a film (col. 12, line 16) onto the structural feature by energy beam assisted deposit of material from a vapor (col. 12, lines 15-16) through which the beam passes to cover at least a portion of structural feature; ....

(emphasis added). On page 6, of the Office Action dated 8/26/2005, the Examiner states:

> Regarding to claim 13, Peterson discloses a method of forming microelectromechanical structures comprising ...; applying a film of carbon (col. 12, line 16) ... by scanning an electron beam over the structural feature to deposit material from a vapor containing

> carbon through which the beam passes to cover at least a portion of the structural feature (col. 12, lines 14-19); ....

(emphasis added). On page 7, of the Office Action dated 8/26/2005, the Examiner states:

> Regarding to claim 26, Peterson discloses a method of forming structural features on a semiconductor base comprising ...; applying a film of carbon (col. 12, line 16) ... applying a film of carbon (col. 12, line 16) onto the structural feature by scanning an electron beam over the structural feature to deposit material from a vapor containing carbon through which the beam passes to cover at least a portion of the structural feature (col. 12, lines 4-20) ....

(emphasis added). On page 8, of the Office Action dated 8/26/2005, the Examiner states:

> Regarding to claim 35, Peterson discloses a method of releasably holding structural features on a base comprising ...; applying a film of carbon onto the structural feature by energy beam assisted deposit of material from a vapor containing carbon through which the beam passes ... (cols. 7-13).

(emphasis added). Applicants respectfully disagree because, at a minimum, Peterson fails to teach, disclose, or suggest any usage whatsoever of an electron beam or an energy beam.

Peterson describes "[a] method ... for pre-release plastic packaging of MEMS and IMEMS devices." (Abstract). Peterson more specifically describes

> The temporary protective material can include a parylene polymer. The parylene coating can be poly-para-xylylene, poly-para-xylylene which has been modified by the substitution of a chlorine atom for one of the aromatic hydrogens, or poly-para-xylylene which has been modified by the substitution of the chlorine atom for two of the aromatic hydrogens. The method can include blending the parylene polymer with a reactive material to form a copolymer coating. The reactive material can include a monomer containing silicon, carbon, or fluorine, or a combination thereof. The temporary protective material can include silicon nitride, metal (e.g. aluminum or tungsten), a vapor deposited organic material, cynoacrylate, a carbon film, a self-assembled monolayered material, perfluoropolyether, hexamethyidisilazane, or

> perfluorodecanoic carboxylic acid, silicon dioxide, silicate glass, or combinations thereof.

(Col. 12, lines 4-20; emphasis added). Nowhere, does Peterson teach, suggest, or disclose "energy beam assisted deposit of material from a vapor [containing carbon] through which the beam passes" as required by claims 1 and 35. Nowhere, does Peterson teach, suggest, or disclose "scanning an electron beam over the structural feature to deposit material from a vapor containing carbon through which the beam passes" as required by claims 13 and 26. As a result, Peterson fails to disclose, suggest, or teach all of the limitations of claims 1, 13, 26, and 35. An obviousness rejection cannot be properly maintained where the reference used in the rejection does not disclose all of the recited claim elements. Applicants respectfully traverse any arguments posed by Examiner relative to claims 2-12, 14-20, 27-34, and 36-44 as they are allowable for at least the reasons outlined above relative to claims 1, 13, 26, and 35. Therefore, Applicants respectfully request withdrawal of the rejection of claims 1-20 and 26-44.

Official Notice

The Examiner further states:

> Regarding to claim 1, ... However, Peterson does not disclose nanomechanical structures (NEMS).
>
> It would have been obvious to one of ordinary skill in the art at the time the invention was made to form nanomechanical structures (NEMS) since it was known in the art to form nanomechanical structures (NEMS) instead of microelectromechanical structures.

(pages 3-4, Office Action dated 8/26/2005). Similarly, the Examiner states:

> Regarding to claims 3, 14, 22, 28, and 37, Peterson discloses the claimed invention except for the method wherein the carbon film is deposited to a thickness of at least 5 nm.
>
> It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the carbon film to a thickness of at least 5 nm, since it has been held that discovering an optimum

> value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

(page 4, Office Action dated 8/26/2005). The Examiner makes similar statements to provide a basis for rejecting claims 1, 3, 5, 8, 13-15, 17, 22, 23, 25, 28, 29, 31, 37, 38, and 40. Applicants respectfully disagree. According to MPEP § 2144.03(A):

> Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known.
>
> ...
>
> It is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. Zurko, 258 F.3d at 1385, ...

The elements asserted are not well-known and capable of instant and unquestionable demonstration as being well known as required under MPEP § 2144.03(A). The formation of such structures having the dimensions and thicknesses recited is not obvious to one of ordinary skill in the art. The development of NEMS devices is an active research area due to the unique requirements to make such structures. Applicants respectfully request that Examiner provide documentary evidence to support these statements.

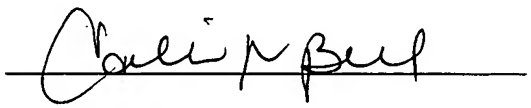
The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2350. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2350. If any extensions of time are needed for timely acceptance of papers

submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2350.

Respectfully submitted,

Date November 21, 2005

By 

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